

Title (en)
Derivatives of dihydro- and tetrahydroquinoline as a medicinal antioxydants

Title (de)
Dihydro- und Tetrahydrochinolinderivate als medizinisches Antioxydants

Title (fr)
Dérivés de dihydro- et tétrahydroquinoléine en tant qu'antioxydant médical

Publication
EP 0995743 A1 20000426 (FR)

Application
EP 99402624 A 19991022

Priority
FR 9813306 A 19981023

Abstract (en)

Dihydro- and tetrahydro-quinoline derivatives (I) are new. Dihydro- and tetrahydro-quinoline derivatives of formula (I) and their acid or base addition salts are new. R₁ = H or a group of formula (i); A = H or -B'NZ₁Z₂; B' = 1-6C alkylene; Z₁, Z₂ = H, alkyl, 3-8C cycloalkyl or optionally substituted aryl; or NZ₁Z₂ = heterocycloalkyl or heteroaryl (optionally substituted); R₂, R₃ = alkyl, 3-8C cycloalkyl, heterocycloalkyl, optionally substituted aryl, optionally substituted heteroaryl, cycloalkylalkyl, heterocycloalkylalkyl, optionally substituted arylalkyl, optionally substituted heteroarylalkyl or aminoalkyl (optionally substituted on N with 1 or 2 alkyl, cycloalkyl, aryl or arylalkyl); or R₂ + R₃ = form with C of quinoline, 3-8C cycloalkyl or heterocycloalkyl (optionally substituted with alkyl, cycloalkyl, cycloalkylalkyl, aryl or arylalkyl); R₄₀ = alkyl, 2-6C alkenyl, 2-6C alkynyl (all optionally substituted), H, Q or -V'-Q; V' = 1-6C alkylene, 2-6C alkenylene or 2-6C alkynylene; Q = 3-8C cycloalkyl, aryl, heterocycloalkyl, heteroaryl (all optionally substituted); R₅, R₄₁ = H; or R₅ + R₄₁ = bond; R₆-R₉ = H, halo, alkyl, 3-8C cycloalkyl or -OW'; W' = aryl, heteroaryl, arylalkyl, heteroarylalkyl (all optionally substituted), H, alkyl, acyl, 3-8C cycloalkyl or heterocycloalkyl; alkyl = 1-6C; aryl = phenyl, naphthyl or biphenyl; heterocycloalkyl = partially unsaturated 4- to 11-membered mono- or bi-cyclic ring containing 1-6 N, S or O; heteroaryl = aromatic or partially aromatic 4- to 11-membered mono- or bi-cyclic ring containing 1-6 N, S or O; substituted aryl, arylalkyl = aryl or arylalkyl substituted with at least one halo, alkyl, 1-6C alkoxy, 1-6C perhaloalkyl, amino (optionally substituted with 1 or 2 alkyl), CN, carboxy, 1-6C alkoxycarbonyl, aminocarbonyl (optionally substituted with 1 or 2 alkyl on N), nitro or OH; substituted alkyl, alkenyl, alkynyl and cycloalkyl = alkyl, alkenyl, alkynyl and cycloalkyl substituted with at least one OH, 1-6C alkoxy, 1-6C alkylthio, amino (optionally substituted with 1 or 2 alkyl), carboxy, nitro, CN, 1-6C alkoxycarbonyl or aminocarbonyl (optionally substituted with 1 or 2 alkyl on N); substituted heterocycloalkyl, heterocycloalkylalkyl, heteroaryl, heteroarylalkyl = heterocycloalkyl, heterocycloalkylalkyl, heteroaryl, heteroarylalkyl substituted with at least one halo, alkyl, 1-6C alkoxy, 1-6C perhaloalkyl, amino (optionally substituted with 1 or 2 alkyl), CN, carboxy, 1-6C alkoxycarbonyl, aminocarbonyl (optionally substituted with 1 or 2 alkyl on N), nitro, OH or oxo; and provided that R₆-R₉ are not all H and at least one of R₆-R₉ is -OW', that R₂ and R₃ are alkyl when R₆-R₉ are H, alkyl, alkoxy, R₄₁ and R₅ form a bond, R₄₀ is other than H or alkyl; when (I) has one OH and R₄₀ is other than H; when (I) has one methoxy and R₄₀ is other than hydroxyalkyl; and (I) is other than 7-methoxy-2,2-diphenyl-1,2-dihydroquinoline. An Independent claim is also included for the preparation of (I).

Abstract (fr)

Composés de formule générale (I): <IMAGE> dans laquelle : R₁ représente un hydrogène ou <IMAGE> dans lequel A est tel que défini dans la description. R₂ et R₃ représentent indépendamment un alkyle, cycloalkyle, hétérocycloalkyle, aryle éventuellement substitué, hétéroaryle éventuellement substitué, cycloalkylalkyle, hétérocycloalkylalkyle, arylalkyle éventuellement substitué, hétéroarylalkyle éventuellement substitué, aminoalkyle éventuellement substitué, ou bien, R₂ et R₃ forment ensemble avec l'atome de carbone qui les porte un cycloalkyle ou un hétérocycloalkyle monocyclique substitué ou non. R₄₀ représente un hydrogène, ou un groupement choisi parmi alkyle éventuellement substitué, alkényle éventuellement substitué, alkynyle éventuellement substitué, ou un groupement Q ou -V-Q dans lesquels V représente un alkylène, alkénylène, ou alkynylène, et Q représente un cycloalkyle éventuellement substitué, aryle éventuellement substitué, hétérocycloalkyle éventuellement substitué, ou hétéroaryle éventuellement substitué, R₄₁ et R₅ forment ensemble une liaison, ou représentent chacun un hydrogène, R₆, R₇, R₈ et R₉ représentent indépendamment un hydrogène, un halogène, un alkyle, cycloalkyle (C₃-C₈), ou -OW dans lequel W est tel que défini dans la description.

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IPC 8 full level
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Citation (search report)

- [X] US 4305932 A 19811215 - MENACHEMOFF EMIL, et al
- [A] EP 0350304 A2 19900110 - INT ASS OF FISH MEAL MANUFACTU [GB], et al
- [X] CHEMICAL ABSTRACTS, vol. 128, no. 5, 2 February 1998, Columbus, Ohio, US; abstract no. 48145q, SUZUKI, TOMOO ET AL.: "Preparation of malonic acid diamides as antiarteriosclerotics." XP002107502 & JP H09301953 A 19971125 - SANWA KAGAKU KENKYUSHO CO & DATABASE CHEMICAL ABSTRACTS XP002107505
- [X] CHEMICAL ABSTRACTS, vol. 113, no. 5, 30 July 1990, Columbus, Ohio, US; abstract no. 40418a, DE, DIBYENDU ET AL.: "Novel synthesis of 6,7-dialkoxy-2,2-dialkyl-3-hydroxyethyl-1,2,3,4-tetrahydroquinolines." XP002107503 & DATABASE CHEMICAL ABSTRACTS XP002107506 & INDIAN J. CHEM., SECT. B, vol. 29B(1), - 1990, pages 70 - 71
- [X] VASILLA PARTALI ET AL.: "Photo-Emde Degradation of 1,2,3,4-Tetrahydroquinolinium Salts", HELVETICA CHIMICA ACTA., vol. 68, - 1985, BASEL CH, pages 1952 - 1960, XP002107501
- [A] CHEMICAL ABSTRACTS, vol. 92, no. 18, 5 May 1980, Columbus, Ohio, US; abstract no. 149667e, SHMULOVICH, V. G. ET AL.: "Study of the antioxidant activity of inhibitors of the oxidation of paraffin oil hydrocarbons." XP002107504 & NEFTEKHIMIYA, vol. 19, no. 6, - 1979, pages 912 - 920

Cited by
WO2004087160A1

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